

GEO 2007-2009 WORK PLAN MATRIX

11 April 2007

Area	Task #	Task Title	Proposition for potential contribution from LPV	LPV achievements	Contact	References
Agriculture	AG-06-04	Forest Mapping and Change Monitoring	1) Recommendations for Evaluation and Accuracy Assessment of Global Land Cover Maps;	1) LPV with GOF-C-GOLD contributed to this task by encouraging coordinated developments and providing the framework for evaluation of Global Land Cover maps. Documents were written that report methodology and results for the validation of land cover maps.	Alan H. Strahler, Philippe Mayaux, LPV chair	1, 2, 3, 4
			2) Proposition of using biophysical products for change detection.	2) To be discussed and tested		
Agriculture	AG-07-01	Improving Measurements of Biomass	1) provide accuracy evaluation of inputs to vegetation productivity models	1) Biophysical variables such as LAI and fAPAR are key inputs to vegetation productivity models. LPV has been focusing on those variables, by (i) proposing a clear and consensus definition of these variables, (ii) describing departure of available products from the main definition, (iii) developed of a methodological framework for accuracy assessment of products, and (iiii). Results on evaluation of medium spatial resolution LAI products accuracy from ground measurements and intercomparison between available products.	LPV Chair, Sebastien Garrigues	5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
			2) provide recommendations for accuracy assessment of productivity, gross primary production and biomass	2) Discussions started at Global Vegetation Monitoring meeting (Missoula 2006) and papers published in IEEE TGARS validation special issue.		
Climate	CL-06-02	Key Climate Data from Satellite Systems	1) Provide accuracy statements for Essential Climate Variables (ECVs) as defined in the GCOS Implementation Plan for the terrestrial domain. Emphasis on land cover, Albedo, LAI, fAPAR, Fire and soil moisture products from medium resolution sensors.	1) LPV with GOF-C-GOLD contributed to validate global land cover maps. Similarly, LPV contributed in the validation of LAI, fAPAR and fire products.	LPV chair	18, 8
Climate	CL-06-03	Key terrestrial observations for Climate	2) Propose strategies to exploit in a consistent way historical satellite archive and derive long time series of products.	2) LPV proposed strategies to build consistent long time series of biophysical variables		
Data Management	DA-06-02	GEOSS Quality Assurance Strategy	1) Provide a strategy and methods for quality assessment of land cover (with GOF-C-GOLD) fire and biophysical products derived from satellite observations.	1) A strategy has been defined for the validation of higher level products: land cover (with GOF-C-GOLD) and fire and LAI and fAPAR biophysical products. Results show that stage 2 of the validation is achieved, but stage 3 (quantitative accuracy assessment representative of global conditions) is not yet reached.	LPV chair	2, 6, 7
			2) Maintain easy access to key information for the validation LPV.	2) A web site is set up providing information on validation activities. Articles in peer reviewed journal have been published with results based on methods proposed within LPV.		
Data Management	DA-06-04	Data, Metadata and Products Harmonisation	3) Organizes meetings to define and discuss the methods and share results with the community.	3) Workshops have been organized to define and discuss the methods and share results with the community.	Martin Herold LPV chair	21, 5, 8, 9, 10, 11, 12, 13, 14, 15
			1) Provide strategy for harmonization of global land cover mapping	1) A strategy for harmonization of global land cover has been defined, allowing intercomparison of classifications and maps.		
Data Management	DA-06-04	Data, Metadata and Products Harmonisation	2) Provide a strategy for harmonization through intercomparison of homologous biophysical products	2) A strategy for intercomparing biophysical products has been proposed. Preliminary results are available for LAI and fAPAR.	Martin Herold LPV chair	2
Data Management	DA-07-02	Global Land Cover	1) Recommendations for Evaluation and Accuracy Assessment of Global Land Cover Maps;	1) LPV with GOF-C-GOLD contributed to this task by encouraging coordinated developments and providing the framework for evaluation of Global Land Cover maps. Documents were written that report methodology and results for the validation of land cover maps.	Alan H. Strahler, Philippe Mayaux, LPV chair	1, 2, 3, 4
			2) Proposition of using biophysical products for change detection.	2) To be discussed and tested		
Data Management	DA-07-03	Virtual Constellations	1) Propose a strategy for intercomparison of products derived from several sensors.	1) A strategy for intercomparison of products was proposed with application to biophysical variables (LAI, fAPAR)	LPV Chair	5, 6, 7, 8
			2) Propose methods for merging products coming from several sensors	2) Simple solutions proposed for merging products coming from similar sensors		
Disasters	DI-06-09	Use of Satellites for Risk Management	3) Evaluate benefit of using virtual constellation products	3) Early evaluation for albedo and BRDF products	LPV Chair	24, 25
			4) Define minimum requirements for inter-operability of sensors	4) Not yet achieved		
Disasters	DI-06-09	Use of Satellites for Risk Management	1) Propose a strategy for intercomparison of products derived from several sensors.	1) A strategy for intercomparison of products was proposed with application to biophysical variables (LAI, fAPAR)	LPV Chair	5, 6, 7, 8
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Ecosystems	EC-06-01	Integrated Global Carbon Observation (IGCO)	1) Provide uncertainties on products used to scale up local observations to region and scale	1) Uncertainties available for few products required in the scaling up process: land cover, albedo, LAI and fAPAR	LPV Chair	21, 5, 8,9, 10, 11, 12, 13, 14, 15
Ecosystems	EC-06-02	Ecosystem Classification	1) Propose recommendations for Evaluation and Accuracy Assessment of Global Land Cover Maps; 2) Propose to use biophysical products for change detection.	1) LPV with GOFC-GOLD contributed to this task by encouraging coordinated developments and providing the framework for evaluation of Global Land Cover maps. Documents were written that report methodology and results for the validation of land cover maps. 2) To be discussed and tested	Alan H. Strahler, Philippe Mayaux, LPV chair	1, 2, 3, 4
Ecosystems	EC-06-07	Regional Networks for Ecosystems	1) Development of validation of products for the monitoring of ecosystems at regional level	1) LPV developed a strategy for validation of land cover and biophysical products. Early results are available for land cover and LAI, fAPAR and albedo	LPV Chair A. Strahler P. Mayaux	1, 2, 3,4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
Ecosystems	EC-07-01	Global Ecosystem Observation and Monitoring Network	1) Contribute to provide a global classification of ecosystems 2) Contribute to develop a global sampling scheme for ecosystem characterization and monitoring 3) Propose methods to up-scale local ground measurements to larger spatial domains	1) LPV with GOFC-GOLD contributed to this objective by encouraging coordinated development of consistent land cover mapping. 2) LPV has proposed a global network of sites that samples vegetation types and conditions. It is based on existing thematic networks such as AERONET or FLUXNET and sites where ground measurements are collected for the direct validation of medium resolution biophysical products. Agencies agreed to provide extracts of medium resolution products they are in charge. 3) In the framework of the validation of medium resolution products, up-scaling methods have been developped to extend over larger spatial domains a set of local ground measurements and qualify the spatial sampling used. These methods are based on high spatial resolution images.	LPV chair	1, 2, 4 7 6, 26, 9, 10, 11, 12
Weather	WE-06-02	Space-based Global Observing System for Weather	1) Provide accuracy statements for Essential Climate Variables (ECVs) as defined in the GCOS Implementation Plan for the terrestrial domain. Emphasis on land cover, Albedo, LAI, fAPAR, Fire and soil moisture products from medium resolution sensors. 2) Propose strategies to exploit in a consistent way historical satellite archive and derive long time series of products.	1) LPV with GOFC-GOLD contributed to validate global land cover maps. Similarly, LPV contributed in the validation of LAI, fAPAR and fire products. 2) LPV proposed strategies to build consistent long time series of biophysical variables	LPV chair	18, 8 20

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#		References				
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	5	http://lpvs.gsfc.nasa.gov/lai_intercomp.php				
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